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SPACE PILOTS WILL STILL REQUIRE WEATHER FORECASTER "OUT THERE"

Establishment of an "outer space weather bureau" to track and avoid deadly clouds of meteoroids may be needed for man's successful conquest of space, according to an official of one major U. S aircraft company involved in missile manufacture.

A. M Mayo, chief equipment and safety research engineer for the Douglas Aircraft Company, made the disclosure in an address before a University of California audience during a recent space technology lecture series.

He declared the science of predicting and locating high concentrations of meteoroids or "space debris" may become "at least as important as that of meteorology or weather forecasting on earth."

Mayo stated that pitting, temperature rise, and penetration effects of meteoroids present increasing problems as new count data become available from astronomers In addition, he said, heavier concentration of debris are known to exist in the tails of comets and in clouds

In what may become major contribution to space flight research, Mayo advanced a series of complex factors which could lead to a new theory on penetration of the structural skin of a space craft

Explaining the phenomena created by minute meteoroids striking the skin at hypersonic impact speeds, the Douglas engineer said the energy from impact is dissipated in the form of radiation, ionization and evaporation of material, melting, heating and physical displacement.

He also revealed that data from satellite tests currently being conducted by the United States should soon be available in sufficient quantity to help science solve the meteoroid penetration problem.—Legion Air Review.

YOU CAN HELP

With the launching of Sputniks and resultant emphasis on future space travel, it appears we in aviation have a very heavy responsibility in properly portraying the impacts of "The Air Age."

Scientific developments are bringing a futuristic travel medium to a public which does not yet fully understand or accept the air transportation available today. The need for disseminating aviation information to schools, service clubs, and other public meetings can only be met by active promotion on the part of airport operators and those affiliated, by the many facets of our industry

Why not try to arrange an "Aviation Day" at your local service club and arrange to get them a speaker or show one of our many excellent non-commercial aviation films? Then arrange to bring such a program to the local schools; you will find all superintendents and principals receptive to high-level educational projects

If interested, write your department a letter that we may help in working out the planning for a successful venture

CONTROLLED AIRWAYS

Over the week end, Civil Aeronautics Administrator James Pyle announced government plans to establish five coast-to-coast "limited access freeways," in which all planes would fly instrument flight rules. Pyle termed the move a first step to universal IFR

Speaking on CBS Television's "Face the Nation," Pyle said the lanes would be set up in altitudes from 17,000 to 22,000 ft., and would require CAA clearance for entry He said CAA hoped to have the freeways operating by Sept. 21 this year.

INSTRUMENT APPROACH, DENVER

NOTICE—Effective June 15, all aircraft flying to Denver must contact approach control on 119 5 ms 25 miles out. Approach control will then provide specific information at what point pilot must contact Denver tower for further landing instructions. We are advised that this ruling is to be put into effect to alleviate part of the load currently borne by tower personnel.

RUSSIA MAY FLY A-PLANE NEXT YEAR

A strong possibility of Soviet nuclear-powered flight "within less than a year" was indicated by Lt Gen. D. L. Putt, Air Force Chief of Staff for Development, in remarks prepared for delivery to the Houston, Texas, convention of Aviation Writers' Association recently. In what he said would "probably be my last public speech as a member of the Air Force," Putt attempted to outline future trends and the present status of U. S air power

Putt said the present nuclear-propulsion program in the U S "encompasses not only a bomber but propulsion devices for rockets, ramjets, and auxiliary power plants for satellites and space vehicles." In spite of these and other advances, he said, the U. S technical advantage over the Soviet Union "is rapidly being closed."

In his prepared text, Putt laid heavy stress on the continued need for manned aircraft, saying he did not believe "there will ever be a gadget of any kind ever perfected that will totally replace man." He predicted nuclear-powered commercial aircraft which would fly "invisible radar beams" through dense air traffic. "Such future electronic control," said Putt, "will prevent the unfortunate air collisions we have had in the recent months as well as avoid other accidents during approaches in weather "—Aviation Daily

SYMINGTON SAYS ADMINISTRATION DRAGS FEET ON DEFENSE

Sen Stuart Symington (D.-Mo.) has charged the Administration is following a policy of inaction which is giving military superiority to Russa. He called on President Eisenhower for an "accounting to the people."

Symington declared in a speech in the Senate that a "stirring" followed Sputnik I but the "Administration has fallen back into its former ostrich-like complacency." He reviewed the 17 recommendations of the Senate Preparedness Subcommittee after the first phase of its investigation into the U. S. missile and sattelite program In almost every case he was dissatisfied with the Administration action and charged that budget limits, indecision, delay, inaction and lack of urgency had interfered with carrying out the bipartisan recommendations.—Avn. Daily

WARN YOUTH NOT TO TEST ROCKETS UNLESS SUPERVISED BY EXPERT

Students should not experiment with rockets and other missiles unless such activity is as rigidly controlled and expertly supervised as are experiments by rocket scientists and engineers.

In the absence of such safety measures, educational activities in these new fields should be confined to less spectacular but important projects, U. S. Office of Education officials advise.

"Young people's interest in rocketry and other scientific fields definitely should be encouraged," Lawrence G Derthick, U. S. Commissioner of Education, declares. "However," he says, "recent serious accidents involving persons experimenting with rockets emphasize the need for strict precautions."

Willis C Brown, Office of Education specialist for aviation education, points out that some propellant fuels are extremely hazardous, and that many persons sometimes attempt fuel combinations and firing methods which would be dangerous even if attempted by professional rocket experts

Noting that calculated risks often are necessary to scientific progress, Mr. Brown stresses that these risks, reduced to a minimum, should be assumed by trained adult scientists and not by high school students.

Under no circumstances, he says, should a youth build a rocket, or attempt to launch it without supervision by an adult rocket expert Nor should youth work alone with rocket fuel in a home workshop or school laboratory.—Legion Air Review

HERTZ STARTS WITH 269 RENTAL PLANES

Hertz Rent-a-Plane service was inaugurated recently in 56 cities with 269 aircraft ready for operation The system will be directed by Hertz vice president, Paul A. Larson. Taxiplane charter service will claim 108 of the craft, Fly-Yourself service will take 81 planes, and the remaining 80 will be used for both types of service. Twin-engine planes number 63, and 206 are single-engine craft.

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"**To foster aviation as an industry**, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in **research, development**, and **advancement of aviation**; to develop uniform aviation laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

TACTICAL AIR NEWS

. . . At an air show put on for the Aviation Writers Association convention in Houston, one jet fighter pilot "stole the show" when he placed a bomb directly on target (an old seaplane anchored in bay) from a vertical release.*

. . . At any given moment of the day, USAF has approximately 1,150 aircraft air borne somewhere in the world . . . every 60 seconds these aircraft fly 4,750 miles.

. . . The Air Force is proud, accident rate has continued downward—from 506 major accidents per 100,000 hours of flying time in 1921, to low of 13.6 for 1957. Rate so far this year is 11.9.

. . . In 1957, Air Force had 3,061 in-flight jet fighter engine failures; however, only 310 or 10% resulted in accidents or a reportable incident The accident rates for modern jet aircraft are lower than rates of propellor-driven aircraft of same type; however, 25 years ago AF had one fatal accident for every 13 major accidents. Today, it is 1 in 3.

. . . 53% of all accidents involve error on part of pilot.

. . . Closing speed in high performance flight is terrific—reactions of man are appallingly slow when pitted against the rapidity of events he may encounter on a collision course. At altitude, the eye does not focus on infinity—it has a tendency to focus at a very short distance; some medical people say as little as 3 feet beyond windscreen of the aircraft—have reason to believe that two to three miles is about the average at which pilots at high altitude will see another aircraft—at speed of approximately 600 mph., impact would develop in four seconds. . . . of two high speed aircraft altitude should happen to be on a collision course, chances are a crash will be inevitable.

SAC units will receive Northrop's SNARK missiles next year. . . . first intercontinental missile to become operational.

. . . North American F-108, long range interceptor will be able to reach out over long distances at Mach. 3 and above . . . will have a guided air-to-air missile with atomic warhead.

. . . North American B-70 is high altitude, long range bomber . . . will fly at speeds in excess of 2,000 mph.

. . . Russians should fly a nuclear propelled aircraft in less than a year

. The North American X-15, a high speed, high altitude research aircraft should be flying sometime next spring—is a semi-space vehicle designed for speeds of 3,600 mph., and an altitude over 100 miles . . will provide man with first real step into space.—(See Saturday Evening Post for June 21)

. . . The DYNA SOAR, a manned vehicle, will take us farther into space and is designed to actually go into orbit, circle the earth and return to a selected landing field in the U.S.

. . . Present engines and means of propulsion will be superceded by more effective and efficient propelling devices depending on photons or ions. In the meantime, nuclear propulsion should come into its own not only in weapons systems within the earth's atmosphere and space, but no doubt in the commercial aviation field as well.

In time, the civil use of outer space will come into its own and we will see space used, enjoyed, exploited, and possibly even taxed.

A power plant failure during a space flight means that the vehicle becomes another planet and orbits in the solar system like the earth. We will probably have to change our Air Sea Rescue Service to an Air Force Interplanetary Space Rescue Service.

. . . Weather control could be most helpful and dangerous. Imagine the havoc that could be raised if one nation could control the weather over another nation and use it for either economical or military purposes.

THE ACCIDENT

Coming in for a crosswind landing in an airplane he had just purchased, a student pilot lost control and the light plane slipped into the ground. The airplane was severely damaged but, fortunately, the student pilot was uninjured

According to the records, the student pilot had a total of 18 hours dual and 18 hours solo. He had been checked out in one type of plane, but not in the airplane in which the accident occurred.

In his report of the accident the inspector stated, "No instructor was responsible for this flight. The student pilot took it upon himself to fly the aircraft when he had not been checked out properly nor had his student certificate been endorsed for that particular make and model of airplane."

The inspector added, "The student pilot was under the impression that as long as he had been soloed in one single-engine aircraft he could solo any single-engine aircraft without further check-out. He had received instruction at several airports and from several instructors, and complained that they told him very little about his responsibilities It is believed that he did not wilfully violate CAR 43:55, although he did ignore the advice of the pilot who had delivered the airplane to him."

Supervision

There have been several accidents over the past few years which can be traced directly to a lack of supervision by a flight instructor over students who own their own aircraft and usually base them at a private strip.

CAR 43·55 states: "A student shall not pilot an aircraft other than of the category, class and type which has been endorsed on his student pilot certificate by a flight instructor " No mention is made in this regulation that the student pilot must be checked out and his certificate endorsed for the make and model aircraft. Perhaps the term category, class and type leave much to be desired in definitely limiting the student's operation of aircraft to the make and model soloed.

Solution

New York's Bureau of Aviation suggests, "Amending the CAR to require all student solo practice to be approved and supervised by a rated flight instructor should reduce accidents of this nature."—Flight Safety Foundation

COMMISSION ACTIVITIES

Airport Beacons

The Montana Aeronautics Commission has acquired six surplus airport beacons from the Civil Aeronautics Administration and from the beacon sites in Montana where the beacons have been discontinued These surplus beacons are available to Montana communities for navigation of aircraft.

If your community is interested in having a lighted beacon for your airport it is suggested that the commission office be contacted on this matter.

Air Marking

There are over 300 air markers in Montana which have been painted by the Montana Aeronautics Commission on air marking programs and the commission now has two crews on the road repainting air markers.

Your comment on the use of air markers will be appreciated and we would like to have, for our records, instances in which an air marker has been of aid to a slightly confused pilot in assisting him in determining where he may be at a given time.

Aeronautics Chart

The Montana Aeronautics Commission is preparing material for the revision of the information contained on the reverse side of the Montana aeronautics chart. We would like to have comment on specific information which may be included in the revision.

Commission Building

The Montana Aeronautics Commission operations building is nearing completion and all commission operations should be well established on the Helena airport by early fall We would like to have you come in and call on us there and see this new installation, the official dedication of which will take place in September or October

The Montana Aeronautics Commission was given a building site on the Helena Airport under the provisions of a long term lease following which the Fish and Game Department and the Air National Guard have initiated similar projects with two additional hangars now under construction to serve these two state agencies.

The availability of a long term lease on a municipal airport is a material stimulus to further airport development in many communities.

Elliott Emergency Field

The first emergency landing strip in Montana constructed with state funds is now completed and all pilots are advised of this emergency strip located between Drummond and Missoula and which includes a 4,000 foot strip with a base that will hold up any airplane in the 25,000 pound category.

Border Landing Strips

Construction equipment is now moving dirt in the construction of a joint airport to serve the United States and Canada Customs at Coutts, Alberta, and Sweetgrass, Montana. This project was initiated by the Flying Farmers and Ranchers organization in Montana and Alberta and is being financed jointly by state funds and funds of the province of Alberta.

The Coutts-Sweetgrass landing strip is the first venture of this type on this side of the border and has established a pattern of border landing strips at many points.

The Flying Farmers are to be congratulated in the initiation and support of this project.

White Sulphur Springs Airport

Specifications are nearing completion for the letting of bids for the oiling of the White Sulphur Springs airport. This is an emergency field on the route between Billings and Helena. The initial improvement of this field included an expenditure of $28,000 by the Forest Service in the preparation of the landing area State funds will be spent in oiling the landing strip and the administration and maintenance of the strip will be done by Meagher County and White Sulphur Springs

Plentywood Airport

The new Plentywood airport is nearing completion and Plentywood will shortly be served by a hard surfaced runway all-weather airport. The City of Plentywood and Sheridan County are planning a dedication ceremony on August 3rd and your attendance of this ceremony will indicate that their airport is appreciated by all Montana pilots and the aviation industry

Canyon Ferry Emergency Field

The National Guard and the Army Airport Engineers have completed plans for the construction of an emergency landing strip on the west side of Canyon Ferry Lake. When completed this strip will serve the needs of many flying fishermen and boat operators who may fly to this airport which is located adjacent to the Townsend boat docks

The strip will be a good strip to land at in case of adverse weather in the Canyon Ferry area

Aviation Education

The Aviation Education Division of the Montana Aeronautics Commission under the direction of Mac Johnson is conducting a very active aviation education program in Montana at the present time in conjunction with three Montana colleges: Eastern Montana College of Education at Billings, The University of Montana at Missoula, and Northern Montana College of Education at Havre

There are 59 teachers enrolled in the aviation education workshops and the program includes nine out of state speakers prominent in national aviation being scheduled on the agenda.

The Montana Aeronautics Commission has paid the entrance fees at each institution for the teachers enrolled in this course and has provided for workshop directors who are experienced teachers employed by the commission for this program. The Civil Air Patrol is furnishing aviation speakers and Air Force officers to assist at each of the educational institutions Field activities include a visit to Malmstrom Air Force Base with transportation furnished by Montana pilot organizations.

Flight Scholarship Program

The Montana Aeronautics Commission has sponsored a flight scholarship program which includes flight training through the private pilot license for ten teenage youngsters The interest shown in this program will indicate to the commission the justification for continuance of flight training scholarships on an annual basis.

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*Vertical Release—Pilot releases bomb while in an absolute vertical climb above target following a very low level, high-speed approach—release made at approximately 8,000'—bomb continues straight up several thousand feet more—then lobs over and descends on target.

MONTANA MAN JOINS NATA FOR STAFF

Heading the department of matters pertaining to agricultural aviation, maintenance and the NATA Annual convention, is Robert E. Monroe, former president of the Montana Aviation Trades Association. His last assignment was in Prescott, Arizona, where he operated his own aviation service.

The announcement was made by William Lotzer, NATA President, who joined the entire NATA membership in feeling that Executive Director Charles A. Parker could use a pair of extra competent hands to match his own.—Cross Country News, May, 15, 1958.

CAA STUDY DETAILS WITH MID-AIR COLLISIONS

One airplane overtaking another is the prevalent situation in mid-air collisions, an investigation by the Civil Aeronautics Administration has revealed. Study shows that 42% of such accidents resulted from one aircraft directly overtaking another and more than 80% of the accidents occurred when the horizontal angle between the converging flight paths was 90° or less.

Other findings of the study, which was conducted by R. Bryon Fisher and Wayne D. Howell of CAA's aircraft division, are: Rear hemisphere is restricted visually in the average civil aircraft; majority of past mid-air collisions happened within five miles of an airport, 54% within one mile; mid-air collisions are most likely to occur at altitudes of less than 3,000 ft. above the ground, 66% occurred at 1,000 ft. altitude or less.

Study, titled "An Investigation of Some Parameters Related to Mid-Air Collisions of Aircraft," is available from Office of Technical Services, Dept. of Commerce, Washington, D C. at 50c per copy—Am Avn. Daily.

INSTRUMENT TRAINING IS PROPOSED TO OBTAIN PRIVATE OR COMMERCIAL PILOT CERTIFICATE

Amendments to Civil Air Regulations, Part 20, are proposed by the Civil Aeronautics Board. The new regulations would require that all pilots, both private and commercial, have elementary training in techniques of instrument flying

Draft Release No. 58-2, which contains the proposed changes, plus an explanation of the factors which led to the changes, may be obtained from Oscar Bakke, Director, Bureau of Safety, Civil Aeronautics Board, Washington 25, D C.

The amendments would require "private and commercial pilot applicants to have knowledge of and to demonstrate skill in the proper use of two-way radio communication procedures and techniques; to obtain clearance to operate in control zones including obtaining weather, traffic and other information in flight, and in maintaining the attitude and directional control of the aircraft solely by reference to instruments.

"In particular, it is proposed to require five hours of instrument flight instruction for private pilot applicants and 10 hours of instrument flight instruction for commercial pilot applicants . To provide for this additional experience it is proposed to raise the total flight time requirements for a private pilot certificate from 40 to 50 hours; however, no change is contemplated in the total flight time requirements for commercial pilot applicants although, as noted, such applicants will be required to have had 10 hours of instrument flight instruction in the total of 200 hours prescribed for such certificate

"It should be clearly understood that, notwithstanding this requirement of basic instrument training for non-instrument qualified pilots, it will continue to be a violation of Sec. 43.65 of the Civil Air Regulations for a pilot to pilot an aircraft into weather conditions less than those prescribed for visual flight unless he holds a valid instrument rating."—Indiana Air News

TIRES FOR FUTURE AIRCRAFT WILL REQUIRE NEW MATERIALS

Requirements of aircraft tires are rapidly approaching limits of existing materials and the industry is turning to experiments with new polymers and cords to solve heat and high pressure problems inherent in high-speed aircraft

Goodyear Tire & Rubber Co. said that current tires are handling landings at speeds of 275 mph, but by 1960, 400 mph. landings may be needed. Tires will have to withstand temperatures of from -65F to 800°F but present rubber smears at 380°F and nylon melts at 482°F.

Nuclear radiation has no detrimental effect on present tires, so that no problems are expected from use on nuclear-powered aircraft

GOOD HOUSEKEEPING IMPORTANT IN AIRCRAFT OPERATION

The new proud owner of a Bonanza based in South Carolina decided to take advantage of the speedy travel available to him and fly to Florida.

The trip down was uneventful, and when the time came to return, he jumped into his plane, threw his coat over the back of the front seat and took off for his home in S. C

Everything went fine until as he neared his home port, he tripped the switch to lower the gear The gear went about half way down and ground to a stop neither up nor down.

Investigation disclosed that the manual crank for lowering the gear, located just back of the front seat, had either slipped its leather cover or had never been covered As the gear was lowered, the crank became entangled in a sleeve of the coat hanging over the seat and when the gear was partly down, the motor ground to a halt and then popped the circuit breaker.

After disentangling the coat from the manual crank, the pilot was unable to reset the circuit breaker due to the fact that the motor had heated to a considerable extent before the circuit breaker had popped out He managed to crank the gear down by hand and the landing was successful. He could also have waited until the motor had cooled down and then reset the circuit breaker. LIVE AND LEARN.—S C. News Letter.

ALTITUDE, ANOXIA, ALCOHOL

A recent issue of "The Flying Physician" featured an article titled, "Hypoxic Euphoria" which is the short way of describing that false sense of well-being that comes from too little oxygen. Author of the article, Dr. Herman A. Heise, is a pilot and he here offers first hand scientific knowledge of the "A's" that work ill for flying. This is what happened to him:

Altitude

"What a grand experience to fly high! Surely there must be a primitive urge to rise above this world, and he who hasn't tried to discover the limits of his flying ability is a sensible fellow.

"On one occasion my curiosity prompted me to fly at 18,000 feet for several hours. Never before had my plane run so smoothly or my mind been keener. In fact, I conceived the brilliant idea of flying at this altitude indefinitely by mechanically compressing the air in my lungs, thus being able to utilize more oxygen So . . I took a deep breath, elbows at shoulder height, then forcibly pressed my bent arms against my chest while holding my breath.

"Suddenly things began to happen. I thought both shoulders had gone out of joint. The pain was excruciating and I was sure I was a goner. A heart attack, no less. What to do? I must get down. the pain . . . cold sweat. I guess they were right when they said I was too old to fly. I must get down.

"Of course, carb heat, but where is the darned control button? I pulled all the gadgets on the panel. They all looked alike, even the parking brake Then a 2,000-foot dive and all was well. Not an ache, mind clear and so up to 18,000 again. The results? A repeat, plus the darndest headaches for the following week. I assure you this is one experiment that will not be repeated by me Who says I'm too old to learn!

"The next time I took oxygen with me and coaxed the plane up 24,400 feet Here it wallowed, nosehigh, and I recorded an IAS of 90, temperature minus 20C, a TAS of 136 mph I remembered a pilot had told me that to get extra altitude when you'd reached your ceiling, you should do a chandelle. Suddenly the horizon which had been straight and clear assumed the most beautiful fuzzy waves and I caught myself enjoying the sight. Then I knew . . here we go again . . must get down, but how? Oh, yes? pull on carb heat . . but where is the so-and-so?

"What I didn't know was that the plane wouldn't fly at that temperature and altitude without **carburetor heat*** and the control already was all the way out Anyway, the dive straightened out the horizon very nicely My explanation for this experiment was a frozen oxygen line while using the gas at a great rate at a low temperature.

ANOXIA

"Not only do you get high by flying high, you can get equally high by flying low. I'll confess that I have made numerous attempts to break underwater swimming records. My last attempt made the greatest impression on me

"I remember taking about 20 deep breaths, enough to cause a tingling of lips and fingers and a feeling of unreality, and then diving into the pool. During the first hundred feet or so, there was no desire to breathe since I had stocked up well. Then the feeling that a breath would come in handy, but the act of swallowing counteracted that desire. Must keep on swimming . . or rather walking through the woods, sunlight streaming down, beautiful music, warmth and great happiness I remember thinking I could do this forever I was proud of myself . . . I was swimming to the edge of the pool with powerful strokes Or so I thought. Actually, I was the floundering swimmer that two spectators had seized and carried to the edge of the pool so that several others could lift him out and carry him away!

Alcohol

"A more orthodox but not necessarily a safer method of getting high occurred while performing experiments to determine, for the sake of science, the objective and subjective symptoms of intoxication. While matching my fellow imbibers drink for drink, I was impressed with their ludicrous antics while I proceeded to improve constantly I still remember how, with the grace of a tight rope artist, I walked the line, touched my nose, recited poetry and even made a speech about something which I had never before understood. On the other hand, the other fellows just couldn't take it. They acted silly and about the time I tried to warn them that they were getting all fuzzy, my wife took me by the arm and insisted that I go to bed The best part of my performance was my forbearance in not saying, 'Might as well, Honey, I'll get hell when I get home anyhow' "

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*According to reliable reports, "if you don't use heat on these engines at high altitude, they will miss badly" It is not a problem of carb ice, but rather a problem of mixture distribution, due perhaps to the outdoor type plumbing of the induction system.

WHO, ME?

Air Force officers believe we can keep man in space for 6 days—long enough for flight to moon and return. U. S. could put man in space with present Atlas and available engines if we wanted to put necessary time and money into project—can put one-half ton satellite into orbit with present engines.

. . . Russians have sent several dogs about 125 miles and returned to earth with no visible ill effects—expect to be drinking Vodka on the moon in 1967, anniversary of Russian Revolution.

(Dr. Walter R. Dornberger, Asst. to the President of Bell Aircraft, and WWII Commander of the German V-2 project, recently stated that the ability to provide the safe return of man from space at the pre-determined landing field with about 120 knots landing speed will, to a large extent, determine which nation will rule space.)

CORRECTION—122.8 Crystal

The December Newsletter in an article on Unicom operation suggested that "that you get a 122.8 crystal installed by an A&E mechanic.

CAA advises that the crystal must be installed by an approved Repair Station or a certificated airframe mechanic qualified under CAR 24 40.

Anyway, get a crystal installed in conformity with CAA regulations and FCC requirements. "Life is getting more complex" Not Crystal Clear

NEW NEBRASKA AERIAL APPLICATORS REGULATIONS ADOPTED

Amended regulations affecting the aerial application of chemicals and seeding in the State of Nebraska have been adopted by the Nebraska Department of Aeronautics and are effective as of April 25, 1958

The new regulations are actually an amendment of Part IX of the Rules and Regulations of the Department and have to do with pilot qualifications and performance bonding mainly

Under the new 9 4 Regulation, in the case of an applicant other than an individual or of an applicant who is not himself qualified to engage in aerial application, the application shall give the name and qualifications of the pilot who will be in direct charge and supervision of all operations under the waiver

Under the new 9.5 Regulation, a $1,000 bond is required for each aircraft operated However, if the applicant desires, he can file a blanket bond in the penal sum of $1,000 times the number of aircraft to be operated

Under 9 6—Waiver When Granted No application for an application waiver shall be granted unless it shall be made to appear to the satisfaction of the Directer that

1 Applicant is the holder of a current waiver issued by the Civil Aeronautics Administration authorizing such operations, and such waiver is registered with the Department on a registration form furnished by the Department

2. The aircraft to be used in the proposed operations, and installation of the aerial application equipment thereon, have been approved by the Civil Aeronautics Administration.

3. The applicant (or in case the applicant is not a qualified individual, the person to be in direct charge and supervision of all aerial application operations) is a duly certified commercial pilot, whose airman's certificate is duly registered with the Department having a current medical certificate, who has had experience as follows (a) 350 hours of dual, solo and pilot command logged time, five hours dual simulated aerial application time certified to by a commercial aerial application pilot with a minimum of two years pilot experience in aerial application work, and one season's actual experience in aerial application work during which he shall have acquired a minimum of 40 hours experience in aerial application, under the direct supervision of an aerial application pilot who has had a minimum of two years experience in aerial application, or (b) have held a valid aerial application waiver issued by the Civil Aeronautics Administration for one year or longer, before January 1, 1958, and have actually engaged in aerial application for that period

(Source Adopted 4-24-58)

9 7 Employees No waiver-holder shall employ a pilot in aerial application work unless such pilot holds a valid CAA Commercial Certificate, had a current medical certificate and has at least 250 hours of dual, solo and pilot in command logged time, and five hours dual simulated aerial application time certified to by a commercial aerial application pilot Employment of any person not so qualified shall constitute a violation of the waiver and be just cause for revocation thereof

(Source: Adopted 4-24-58)

9 8 Non-Residents. Applicants for aerial application waivers who are non-residents of the State of Nebraska shall, in addition to complying with the requirements hereinbefore prescribed furnish evidence establishing his current qualifications to engage in aerial application in the state of his residence, pay to the Department of Aeronautics as an occupation fee an amount equal to any fee, license or charge collected from or imposed upon non-residents by the state of his residence as a condition to engaging in aerial application in such state, and furnish bond or bonds, conditioned as proved by Section 9 5 in the sum of $1,000 for each aircraft proposed to be used in aerial application under the waiver for which application is made, or in such higher sum as may be required by the laws, rules or regulations in force in the state of his residence

(Source 9 103 adopted 2-1-51, Sec 9 5, Part IX, page 39, Rules Revision filed 12-3-54, amended 4-24-58).

9 9 Aerial Application by Farm Owners, Etc. Special Rule Any applicant for an aerial application waiver who proposes to engage in aerial application only on his own property, or on land farmed by him under a bona fide lease granting him normal tenant's rights and privileges, may be granted such waiver by complying with the requirements hereinbefore made, except that he may be either a private or commercial pilot and the only experience required of him shall be 350 hours of dual, simulated aerial application time certified as provided in Section 9.6 (3), and except also that he shall submit with his application a written description of the land owned or leased by him upon which he proposes to conduct aerial application operations, and any waiver granted him shall be limited to such operations on such land only.

(Source Adopted 4-24-58).

NOW, WHO WOULD'A THOUGHT OF THAT?

U. S Army engineers working at the Arctic Icecap in the fall of 1956 found that a pit carved out of ice is an ideal storage place for aviation gasoline They stored avgas in pits four feet wide and five feet deep When they left the area in the fall they covered the pits with plywood board and sealed them with ice slush When they returned in the spring, they found there had been no evaporation of the fuel during the seven-month period Furthermore it contained less moisture than usual as a result of the low, constant temperatures. Under normal climatic conditions, avgas evaporates rapidly and takes on impurities.—Flight Safety Foundation.

BREAKFAST FLIGHT

The Missoula Hangar of MPA is sponsoring a breakfast flight into Polson, July 13th for the Cherry Festival. Bring your own tie downs. Transportation and food furnished.

OPERATIONAL ALTITUDE

Sunday I took off from a 3,000 foot strip with four people and used all of the strip; temperature 86 , operational altitude 6,900 feet, actual altitude 4,275.

Now is a good time to make use of your operational altitude chart before takeoff.—Wiley.

GENERAL AVIATION SAFETY

Quarterly Inspection Schedule

City	July	August	September
Big Timber	23		
Billings	7, 14, 21, 28	4, 11, 18, 25	8, 15, 22, 29
Bozeman		14	
Butte			18
Glasgow	16	13	10
Glendive	23	20	17
Great Falls	9, 10	6, 7	10, 11
Helena	7, 14, 21, 28	4, 11, 18, 25	8, 15, 22, 29
Lewistown		27	
Miles City	24	21	18
Missoula	23, 24	20, 21	24, 25
Wolf Point	17	14	11

Winn D. Propp, says: "He who hoots with the owls by night finds it tough to soar with the eagles by day"

WANTED—GOOD HORSE

Am anxious to buy a good used plane (radio not necessary) to use for a saddle horse on the ranch. Know of any? Write Mrs. Orpha Dunn, 1144 North 30th, Billings, Montana.

FOR SALE

Cessna 170B, last one made in 1955, very clean, 600 hours, full panel, Lear radio. Write William C. Richards, 201 Third Ave., West, Kalispell, Montana.

FOR SALE

Rawdon T1, serial No. T1-20SD, N2703D. Spray tank will hold 120 gallons. T.T. 490 hrs. Airplane and spraying equipment are both in very good condition. Write Frances Larson, 724 8th Ave., North, Great Falls, Montana.

FOR SALE

1947 Luscombe 8A, radio, 700 hours since major, annual due in August. Price $1,400. Located at Skyway Flying Service, Great Falls. SAC Aero Club.

FOR SALE

One GE-A21-B Transmitter Receiver with Power Supply, Price $60.00. Located at Severson, Inc., Great Falls. SAC Aero Club.

FOR SALE

Model 35 Beech Bonanza, 165 hours SMOH, completely refinished interior, new "57" paint scheme. Total time 1965 hours. Must see and fly to appreciate. Immaculate. Priced to sell, will trade. Write Henry F. Meine, Dillon.

FOR SALE

1956 Fiberglass Taylorcraft, 200 hrs. T.T., 225 hp. Continental Engine Model J. McCauley constant speed prop. Omni and Rotable loop. Full Panel. Price $8,100. Write Mac Johnson, 225 South Montana, Helena, Montana.

FOR SALE

1947 Ercoupe in very nice shape. LF radio, landing lights, 565 hours since new. 200 hrs. since TOP. Call 440 or 398 or write Keith Holmes, Malta, Montana.

CARBON MONOXIDE

A broken cabin air heat intensifier tube is suspect in the fatal crash of a small twin-engined aircraft. Although the finding of the investigating board was inconclusive, its reasoning was simple and direct: (a) defective heater system (b) carbon monoxide present in the cockpit (c) pilot capability of judgment impaired.

Immediately after take-off the aircraft pulled up into an abnormally nose-high climb. Between 100 and 200 feet it had an estimated 40 to 60 degree nose-up attitude The aircraft then fell off to the left, rolled inverted, and dropped into a steep dive All of the occupants died in the subsequent crash.

The cabin air heat intensifier tube at the collector ring of the left engine was found completely separated It appeared to have a rubbed and leaded area extending halfway around the circumference which was not crash damaged

The effect this had on the pilots in the period immediately preceding the accident could not be determined. However, in a test simulating the same conditions samplings of the cockpit air and blood samples taken from the test crew both showed carbon monoxide concentrations

It is believed that this tragic incident indicates the need for a more rigid, and perhaps more frequent, inspection of all heater systems of this type.—Flight Safety Foundation.

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News Letter

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